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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,147	12/12/2003	Benjamin Atkin	51289/JEJ/D359	1566

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EXAMINER

O'CONNOR, CARY E

ART UNIT	PAPER NUMBER
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3732

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,147

Applicant(s)

ATKIN ET AL

Examiner

Cary E. O'Connor

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7, 8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burt (3,518,766) in view of Winston (5,853,290). Burt shows an ultrasonic dental insert for an ultrasonic dental tool comprising a transducer 16 for generating ultrasonic vibrations, a connecting body 34 having a proximal end and a distal end, the proximal end attached to the transducer, the distal end having an engagement portion 40 formed thereon, a handgrip 43 enveloping at least a portion of the connecting body, at least one O-ring 49 for shock absorption (column 4, lines 39-47) mounted between the connecting body and the hand grip and around the engagement portion, and a removable tip 31 engaging the engagement portion. Burt does not teach that the tip is made of plastic. Winston shows an ultrasonic tooth cleaner having a plastic tip 16 (column 4, lines 57+). Making the tips of plastic enables them to be cheaply mass produced and thereby making them disposable. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the tips of Burt out of plastic, in view of Winston, so that the tips may be cheaply interchangeable and disposable. As to claim 2, note that the tip may be made of metal (column 3, last line to column 4, line 2). As to claim 3, note that the tip comprises an

attachment portion 42 for engaging the engagement portion. As to claim 4, the tip is shown to have a tapered portion 32, 33 in Figure 1. As to claim 7, note the groove 56 formed in the tapered portion of the tip. As to claim 8, Figures 2 and 2a show the tip as having a substantially circular cross section. As to claim 11, Burt discloses that the engagement portion is a cylindrical wall defining a cavity and the attachment portion is pressure fit into the cavity (column 4, lines 21-25). As to claim 12, the tapered portion is shown, in Figure 1, including a first portion 32 generally aligned with the connecting body and a second portion 33 which is curved at an angle from the first portion.

Claims 1, 3, 4, 6-8, 12-18, 20-22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al (6,086,369) in view of Winston (5,853,290). Sharp shows an ultrasonic dental insert for an ultrasonic dental tool comprising a transducer 20 for generating ultrasonic vibrations, a connecting body 18 having a proximal end and a distal end, the proximal end attached to the transducer, the distal end having an engagement portion 25 formed thereon, a handgrip 22 enveloping at least a portion of the connecting body, at least one O-ring 35 for shock absorption (column 4, lines 61-63) mounted between the connecting body and the hand grip and around the engagement portion, and a removable tip 16 engaging the engagement portion. Sharp does not teach that the tip is made of plastic. Winston shows an ultrasonic tooth cleaner having a plastic tip 16 (column 4, lines 57+). Making the tips of plastic enables them to be cheaply mass produced and thereby making them disposable. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the

tips of Sharp out of plastic, in view of Winston, so that the tips may be cheaply interchangeable and disposable. As to claims 3 and 17, note that the tip comprises an attachment portion for engaging the engagement portion (see Figure 1). As to claims 4 and 18, the tip is shown to have a tapered portion in Figure 1. As to claims 6 and 20, note the external tube attached along the tip. As to claims 7 and 21, note the groove 44 formed in the tapered portion of the tip. As to claims 8 and 22, Figure 5 shows the tip as having a substantially circular cross section. As to claims 11 and 25, Sharp discloses that the engagement portion is a cylindrical wall defining a cavity and the attachment portion is pressure fit into the cavity (column 4, lines 15-19). As to claim 12, the tapered portion is shown, in Figure 1, including a first portion generally aligned with the connecting body and a second portion which is curved at an angle from the first portion. As to claim 13, note the plurality of bumps 55 on the hand grip. As to claim 14, Sharp discloses a handpiece for receiving the insert and a coil for exciting the transducer (column 4, lines 22-25). As to claim 15, note that Winston teaches that the tips are interchangeable (column 5, lines 12-16). As to claim 16, the dental unit of Sharp inherently has an electrical energy source and a fluid source (column 4, lines 45-55).

Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al (6,086,369) in view of Winston (5,853,290) as applied to claims 4 and 18 above, and further in view of Parisi (4,169,984). The conduit for carrying fluid of Sharp is not formed by a conical wall that defines the conduit. Parisi shows an ultrasonic

dental instrument comprising a tip 25 with a conduit defined by a conical wall. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the tip of Sharp as modified by Winston, as taught by Parisi, in order to better control the direction of the fluid onto the tooth surface.

Claims 9, 10, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al (6,086,369) in view of Winston (5,853,290) as applied to claims 3 and 17 above, and further in view of Finn (6,086,369). The attachment portion of Sharp is not threaded to engage a threaded portion of the engagement portion. Finn shows a vibratory dental handpiece having a tip 52 which has a threaded attachment portion to engage the engagement portion which is also threaded. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the engagement and attachment portions of Sharp with threads, in view of Finn, in order to provide a secure attachment between the tip and the connecting body that is less likely to come apart due to the vibrations of the instrument.

Response to Arguments

Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cary E. O'Connor whose telephone number is 571-272-4715. The examiner can normally be reached on M-Th 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Cary E. O'Connor
Primary Examiner
Art Unit 3732

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